

**STATE OF MARYLAND
DEPARTMENT OF BUDGET AND MANAGEMENT
OFFICE OF INFORMATION TECHNOLOGY**

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**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Improving Public Safety Communications in)	
the 800 MHz Band)	
)	
Consolidating the 900 MHz Industrial/Land)	WT Docket No. 02-55
Transportation and Business Pool Channels)	
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**WRITTEN EX PARTE PRESENTATION:
COMMENTS**

Submitted by:

**State of Maryland
Department of Budget and Management
Office of Information Technology
G. Edward Ryan, II, Assistant Director, Wireless Communications
301 West Preston Street, Suite 1304
Baltimore, Maryland 21201**

May 6, 2002

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I. INTRODUCTION

1. Before the Federal Communications Commission (Commission) for consideration¹ is the NOTICE OF PROPOSED RULE MAKING in the matter of improving Public Safety Communications in the 800 MHz Band. The Commission is specifically soliciting proposals on how best to remedy interference to 800 MHz public safety systems consistent with minimum disruption to our existing licensing structure and assurance of sufficient spectrum for critical public safety communications².

II. COMMENTS

2. The State of Maryland (Maryland) shares the Commission's concerns regarding interference to critical public safety communications systems by digital cellular architecture specialized mobile radio systems (Digital SMR). Maryland agrees in principle with the Commission that co-occupation of the interleaved spectrum by public safety, digital SMR, conventional SMR and Business and Industrial/Land Transportation systems is the major problem causing harmful interference to public safety communications systems. Maryland, however, disagrees with the Commission's assertion that conventional CMRS systems and public safety communications systems cannot coexist in the interleaved spectrum. Prior to the Commission action permitting digital, cellular architecture SMR systems to operate in the interleaved spectrum, public

¹ NOTICE OF PROPOSED RULEMAKING, FCC 02-81, WT 02-55, March 14, 2002.

² Id., at 2.

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safety and CMRS systems operated within the interleaved spectrum with minimal interference. Such interference as existed was resolved within the Rules and did not require the Commission to issue an NPRM for resolution suggestions. Only after the Commission action to permit digital SMR systems to operate in the 806 - 821 MHz bands did significant instances of harmful interference occur. Maryland proposes that the apparent cause of the harmful interference, the digital SMR systems, be relocated to reduce or eliminate harmful interference to public safety communications systems. Relocation of the digital SMR systems is in accordance with the Commission goal of minimizing the effects of relocation while reducing or eliminating harmful interference in the 800 MHz band.

The *NAM Proposal* Channel Realignment Plan

1. Maryland opposes the NAM proposal in that it fails to address the impact to present systems, resources and costs incurred by public safety to implement. Under the NAM proposal, the NPSPAC channels, the best engineered of the public safety communications systems, would be relocated to the 806 - 811 MHz band. NAM asserts that this would provide minimal disruption and that the requisite changes could be made by retuning the equipment rather than replacing it.³ The proposed NAM realignment nominally provides public safety with an insignificant amount of additional spectrum (0.5 MHz or 10 channel pairs). The NAM proposal does not take into account the efforts

³ See *NAM Proposal* at 3-4 and WT Docket 02-55 at 21.

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required of the 55 regional planning committees (RPCs) to reallocate spectrum to the existing NPSPAC public safety communications systems currently operating or under construction in the 821 - 824 MHz band. Different rules were used to determine frequency assignments in the 806 - 816 band as opposed to the 821 - 824 MHz band. Years of effort will be required by the RPCs to allocate spectrum in the 806 - 811 band. This is an unfair burden to the RPCs, which are now gearing up to allocate frequencies in the 764 - 776/794 - 806 MHz band. The NAM proposal also does not address the fiscal impact to those communities operating in both of the affected bands. Many jurisdictions issued municipal bonds to construct their existing systems and to require the general public to expend additional funds to relocate public safety communications systems to a different part of the spectrum is unrealistic, especially in times of declining public revenues and increased security costs created by the events of September 11, 2001. The NAM proposal does not meet the Commission's goals of minimizing relocation effects and costs. The NAM proposal also does not meet the Commission's goal of providing additional spectrum to public safety. The NAM proposal does eliminate disruption of the 900 MHz SMR band and is more advantageous than the Nextel proposal in this respect.

The Nextel Proposal Channel Realignment Plan

2. Maryland opposes the Nextel proposal in that it fails to address the impact to present systems, resources and costs incurred by public safety to implement. Under the Nextel proposal, the NPSPAC channels, the best engineered of the public safety communications systems, would be relocated to the 806 - 814 MHz band with a 2 MHz

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guard band from 814 - 816 MHz protecting the Nextel channels⁴. Nextel claims that this relocation of public safety spectrum would provide minimal disruption and that the requisite changes could be made by retuning the equipment rather than replacing it.⁵ The Nextel proposal does not take into account the efforts required of the 55 regional planning committees (RPCs) to reallocate spectrum to the existing NPSPAC public safety communications systems currently operating or under construction in the 821 - 824 MHz band. Different rules were used to determine frequency assignments in the 806 - 816 band as opposed to the 821 - 824 MHz band. Years of effort will be required by the RPCs to allocate spectrum in the 806 - 811 band. This is an unfair burden to the RPCs, which are now gearing up to allocate frequencies in the 764-776/794-806 MHz band. The Nextel proposal also does not address the fiscal impact to those communities operating in both of the affected bands. Many jurisdictions issued municipal bonds to construct their existing systems and to require the general public to expend additional funds to relocate public safety communications systems to a different part of the spectrum is unrealistic, especially in times of declining public revenues and increased security costs created by the events of September 11, 2001.

3. The Nextel proposal fails to address the technical issues associated with reengineering of existing public safety systems and the requirement to continue to provide uninterrupted public safety service. The Nextel proposal does not address other critical system transition issues such as physical tower space and loading necessary to

⁴ See *id.* Exhibits A and B.

⁵ See *Nextel Proposal* at 9.

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operate two systems simultaneously, parallel system development issues, and the logistics of system changeover for mobile users. The Nextel proposal does not meet the Commission's goals of minimizing relocation effects and costs. Finally, the Nextel proposal involves the unnecessary relocation of multiple incumbent licensees unaffected by digital cellular architecture SMR interference in the 800 MHz band.

The Maryland Proposal Channel Realignment Plan

Maryland has wireless communications systems that experience severe interference from digital cellular architecture SMR systems.⁶ As these systems continue to expand in the State, interference to critical public safety communications systems increases, compromising responder safety and the general public. Maryland desires a solution to this problem that creates minimal disruption to existing public safety systems and users, yet retains sufficient spectrum for the future requirements of the public safety community. Therefore, Maryland is proposing the following alternative channel realignment plan. The Maryland plan will:

- Discuss various means of reconfiguring the 800 MHz band in a manner that will effectively minimize interference to public safety radio systems from Commercial Mobile Radio Service (CMRS) stations using cellular architecture.

⁶ WT Docket 02-55 at 14 and generally the *Best Practices Guide*

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- Discuss what replacement spectrum would be appropriate for displaced incumbents, who would be reimbursed for relocating and who would pay the costs associated with relocation.

- Minimize relocation efforts and costs for incumbent 800 MHz licensees.

The Maryland Plan

1. The Commission enforces a firm deadline of Dec 31, 2006 for incumbent television stations to complete the transition to digital television (DTV) and relinquish the spectrum from 746 to 806 MHz. After that date, incumbent TV stations become “secondary licensees” on the spectrum per Commission rules. Institute the same rules for the DTV transition as were instituted for the emerging technologies (i.e., PCS) where “new” spectrum licensees can participate in a voluntary relocation of the incumbent TV stations until Dec. 31, 2006⁷. TV broadcasters already have the spectrum to broadcast DTV signals⁸.

7 ET Docket 92-9

8 WT Docket 96-86

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Action by the Commission meets several goals. First, by establishing a deadline for DTV transition, the Commission enables companies interested in bidding on the remaining spectrum to know when the spectrum will be available and they can plan accordingly. Second, if companies possessing licenses for the spectrum currently occupied by the incumbent TV stations want to relocate those stations, they can do so. This permits additional beneficial use of the existing spectrum. Finally, action by the Commission establishes a firm timeline for the use of the spectrum by public safety.

2. Relocate existing digital cellular architecture SMR licensees to the 752 – 761 MHz / 782 – 791 MHz spectrum. This relocation will provide the same 18 MHz of spectrum claimed by digital cellular architecture SMRs in the 800 MHz spectrum. Digital cellular architecture SMR licensees will bear the cost of relocating to this new spectrum. Digital cellular architecture SMR licensees also have the option of paying for “early relocation” of incumbent TV stations.
3. In the Maryland Proposal, incumbent Business and Industrial/Land Transportation licensees will not have to relocate unless there is continued interference with public safety in the interleaved band.
4. Assign the additional 2 MHz of SMR channels in the interleaved channels that are occupied by Nextel and other digital cellular architecture SMRs to Public Safety.

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5. Allocate the spectrum occupied by the digital cellular architecture SMRs from 816 to 821 / 861 to 866 MHz to Public Safety. This will provide Public Safety users with an additional 14 MHz of spectrum in the 809.75 to 821 band and will help to meet the goals of the Balanced Budget Act and the recommendations of PSWN⁹.

⁹ See Public Safety Wireless Network (PSWN), *Public Safety Radio Frequency Spectrum: Highlighting Current and Future Needs* at 2 (Jan., 2000) (*Future Needs*).

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PROPOSED NEW 800 BAND PLAN

806	809.75	816	821	824	869
700 MHz Public Safety Channel 69	150 – 25 kHz General Category Channels 1 – 150	250 – 25 kHz Interleaved Channels 150 Public Safety (3.75 MHz) 50 Ind/Land Trans (1.25 MHz) 50 Business (1.25 MHz) Conventional SMR Interleaved	200 – 25 kHz New Public Safety Spectrum Channels 401-600 (5 MHz)	NPSAC Public Safety 230 – 25 kHz Channels	Cellular A & B
	851	854.75	861	866	

PROPOSED NEW 700 MHz BAND PLAN

746	752	761	776	782	791	800	806			
TV 60	PROPOSED NEW DIGITAL SMR CELLULAR ARCHITECTURE SPECTRUM TV 61 & 62 (9MHz)	G U A R D B A N D “A”	PUBLIC TV 63	SAFETY TV 64	G U A R D B A N D “C”	TV 65	PROPOSED NEW DIGITAL SMR CELLULAR ARCHITECTURE SPECTRUM TV 66 & 67 (9MHz)	G U A R D B A N D “B”	PUBLIC TV 68	SAFETY TV 69
		764	777	794						

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6. If there is continued interference, then relocate the currently interleaved seventy Public Safety channels to a contiguous block of spectrum from 809.750 to 811.500 MHz. The fifty Business and fifty Industrial/Land Transportation channels would then occupy consecutive 1.25 MHz blocks, from 811.500 to 814 MHz, and the eighty SMR channels would be located in the 814 - 816 MHz block¹⁰.

7. Conventional analog SMRs licensees can remain interleaved with public safety licensees unless interference problems continue. If interference to public safety licensees continues, then move conventional SMRs systems to the 762 – 764 / 792 – 794 MHz Guard Band channels. Alternatively, create a new “guard band” of 1 MHz by designating the 761 – 762 / 791 – 792 MHz channels as “low power” only.

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ALTERNATE PROPOSED NEW 800 BAND PLAN

806	700 MHz Public Safety Channel 69	150 – 25 kHz General Category Channels 1 – 150	809.75	50 Ind/Land Trans (1.25 MHz)	811	50 Business (1.25 MHz)	812.25	150 Public Safety (3.75 MHz)	816	200 – 25 kHz New Public Safety Spectrum Channels 401-600 (5 MHz)	821	NPSAC Public Safety 230 – 25 kHz Channels	824	Cellular A & B
851			854.75		856		857.25		861		866		869	

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ALTERNATE PROPOSED NEW 700 MHz BAND PLAN

746	752	761	764	770	777	782	791	794	800	806
<div> <div>TV</div> <div>60</div> </div>		<div> <div>PROPOSED NEW DIGITAL SMR CELLULAR ARCHITECTURE SPECTRUM</div> <div>TV</div> <div>61 & 62</div> <div>(9MHz)</div> </div>		C O N V E N T I O N A L S M R 3 MHz		<div> <div>PROPOSED NEW DIGITAL SMR CELLULAR ARCHITECTURE SPECTRUM</div> <div>TV</div> <div>66 & 67</div> <div>(9MHz)</div> </div>		C O N V E N T I O N A L S M R 3 MHz		<div> <div>TV</div> <div>69</div> </div>
				PUBLIC				PUBLIC		
				TV				TV		
				63				68		
				G U A R D B A N D						
				SAFETY						
				TV						
				64						
				TV						
				65						

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8. Nextel can pay the Federal government the \$500 million it was willing to pay to retune public safety, to compensate for loss of auction revenue or other “fair and reasonable” compensation for the spectrum as determined by the Commission.

III. CONCLUSION

Maryland recognizes that the Commission intends to act in the best interests of the affected parties and in a manner that meets the Commission’s goals as outlined in the NPRM. The Maryland Proposal offers a viable alternative that meets the Commission’s goals of minimizing the effects and costs of relocation, eliminating or greatly mitigating the causes and effects of interference in the 800 MHz bands and increasing the amount of spectrum for public safety users. The Maryland Proposal provides a blueprint for the Commission to implement a band-restructuring plan for the nation’s public safety radio communications systems that is free of harmful interference.

Commission acceptance of the Maryland Proposal is appreciated by the State of Maryland and is in the public interest.

Respectfully submitted,

/s/ G. Edward Ryan, II

**G. Edward Ryan, II
Assistant Director, Wireless Communications
State of Maryland
Department of Budget and Maryland
Office of Information Technology**